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08/787,745    01/24/97    HOEFLICH

J    29124-009

EXAMINER

QM32/0504

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ART UNIT

PAPER NUMBER

3711

DATE MAILED:

05/04/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**08/787,745**

Applicant(s)

**Hoeflich**

Examiner

**Stephen Blau**

Group Art Unit  
**3711**



☒ Responsive to communication(s) filed on Apr 27, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-3, 5-9, and 11-21 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-3, 5-9, and 11-21 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The changes to claim 13 is agreed with and the rejection under 35 U.S.C. 112, second paragraph, is agreed.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Akatsuka.

Akatsuka discloses a shaft comprising a plurality of layers of fibers in a form of an inner, outer and reinforcement layers (Figure) imbedded in a synthetic resin in a form of a plastic material epoxy resin (Col. 4 Lns. 24-35, Col. 5 Lns. 1-7), a butt end of relatively larger cross sectional diameter (Col. 5 Lns. 62-68) tapering without intervening discontinuities to a tip end of relatively smaller diameter in a form of an outer diameter gradually increasing from one end

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adjacent to a tip end of a shaft to an other end adjacent to a grip end of a shaft (Col. 3 Lns. 56-60), a tip end having an outside diameter between .330 and .4 inches in form of a tip end having an inside diameter of 2-6 mm and a wall thickness of 1.2-3.2 mm (.17-.488 inches, Col. 5, Lns. 62-68), a butt end having an outside diameter of from .520 to .540 inches in a form of an inside diameter of 11.5-14.5 mm and a wall thickness of .5-2.0 mm, and a butt end having a wall thickness of between .04 and .045 inches in a form of having a butt end wall thickness of .5-2.0 mm (Col. 5 Lns. 62-68).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) as applied to claims 1-3, and further in view of Hogan.

Akatsuka discloses two inner layers of fibers in a form of two kinds of wound layers in an inner layer imbedded in epoxy and having fibers oriented at angles of +45 degrees and -45 degrees relative to an axis of a shaft (Col. 3 Lns. 64 through Col. 4 Ln. 35).

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The difference between the claim and Akatsuka is that Akatsuka does not disclose graphite fibers. Hogan discloses shaft made with graphite fibers (Col. 3 Lns. 56-64). In view of the patent to Hogan it would have been obvious to have graphite fibers in order to have a stronger shaft for a stronger player who swings a club faster.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) as applied to claims 1-3 above, and further in view of Hogan and Akatsuka (5,156,396).

The differences between the claim and Akatsuka (5,437,450) are that Akatsuka (5,437,450) does not disclose an intermediate layer of graphite fibers embedded in epoxy and fibers being oriented longitudinal to an axis of a shaft. Akatsuka (5,156,396) discloses a shaft with an intermediate and outer layer embedded in epoxy and fiber being oriented longitudinal to an axis of a shaft (Figure, Col. 2 Lns. 60 through Col. 3 Ln. 11). In view of the patent to Akatsuka (5,156,396) it would have been obvious to modify the shaft of Akatsuka (5,437,450) to replace the outer layer with an intermediate layer and an outer layer of Akatsuka (5,156,396) and as defined by the claim in order to have a shaft with more longitudinal stiffness. See paragraph 5 for elements previously rejected by Akatsuka (5,437, 450) in view of Hogan.

7. Claims 7-9, 11, 13-16, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Hogan and Iwanaga.

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Akatsuka discloses a shaft length of 45 inches (Col. 7, Ln. 34).

The differences between the claims and Akatsuka are that Akatsuka does not disclose graphite fibers, a butt end comprising a substantially cylindrical cross section, a kick point above a center point of a shaft, a taper of an intermediate section being more significant than in a tip and butt section, and a tip end including parallel sidewalls.

Hogan discloses shaft made with graphite fibers (Col. 3 Lns. 56-64), a butt end having a cylindrical cross section, a taper of an intermediate section being more significant than a tip and butt section, and a tip end including parallel sidewalls (Fig. 2). In view of the patent to Hogan it would have been obvious to have graphite fibers in order to have a stronger shaft. In addition, it would have been obvious to have to have a butt end, intermediate section, and a tip end as defined by the claims in order to have a lower kick point compared to a uniform tapered shaft to obtain more elevation when hitting a ball for the same swing by having a stiffer butt end and a more flexible tip end.

Iwanaga discloses a shaft having a kick point above a center point of a shaft (Fig. 2) for a greater number club in order to ensure controlled swing for exact drop point of a ball (Col. 1, Lns. 41-51). In view of the patent of Iwanaga it would have been obvious to modify the shaft of Akatsuka to have a kick point above the center point of a shaft in order to provide a shaft for a club with a greater number which requires a more controlled swing for exact drop point of a ball.

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8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Hogan and Iwanaga as applied to claims 7-9, 11, 13-16, 18 above, and further in view of Akatsuka (5,156,396).

See paragraph 6 above for elements previously rejected by Akatsuka (5,437,450) in view of Akatsuka (5,156,396).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Hogan and Iwanaga as applied to claims 7-9, 11, 13-16, 18 above, and further in view of Huang.

10. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Hogan.

See paragraph 7 above for elements previous rejected by Akatsuka (5,437,450) in view of Hogan.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Iwanaga.

See paragraph 7 above for elements previously rejected by Akatsuka (5,437,450) in view of Iwanaga. Very little weight is given to how a kick point is displaced since this is an apparatus claim and not a method claim.

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*Response to Arguments*

12. The argument that Akatsuka (450) does not disclose a tip diameter between .330 and .400 inches is disagreed with. Akatsuka discloses a range for an inside diameter and a range for a tip wall thickness and calculating all the possibilities for an outside diameter discloses a tip diameter as defined by the claims. The argument that Akatsuka (450) does not disclose .400 to .540 inches is disagreed with. Again calculations using the given butt end inner diameter and wall thicknesses produces a range that significantly overlaps the range defined by the claims. MPEP 2144.05 clearly only discusses situations when the overlap is extremely small. In review of the patent of Huang, the argument that it is improper to use the reference of Huang since Huang does not specifically disclose narrowing a shaft diameter is still disagreed with. There are many different sizes of butt ends for shafts. It is intuitive that one of the most important consideration for selecting a size of diameter of a butt end of a shaft is consideration with respect to the size of a player's hand. This is implied by the reference of Huang (Col. 6 Lns. 5-10) even though the patent of Huang is for a grip and Huang specifically discloses varying a grip profile. The argument that it is improper to use the reference of Hogan since it implies a stiffer butt end and a more flexible tip end is disagreed with. A shaft in the shape of Hogan can still have a kick point located in the top half of a shaft.



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13. The declaration dated 27 April 2000 has been considered but has not been persuasive. These claims are apparatus claims and words as “displacing” and “adjusting” with respect to the forming of a shaft are given little weight. Therefore words as “a butt diameter displacing a kick point” is given little weight. The importance of kick points are well known and old in the art and there are numerous ways to form a kick point with shaft diameter as being only one way. Wall thickness as well as type of material along the longitudinal axis of a shaft can also locate flex points.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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*Conclusion*

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Jeanette Chapman whose telephone number is (703) 308-1310. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.

slb/ 2 May 2000



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